

# **Product Life Cycle Support Modeling**

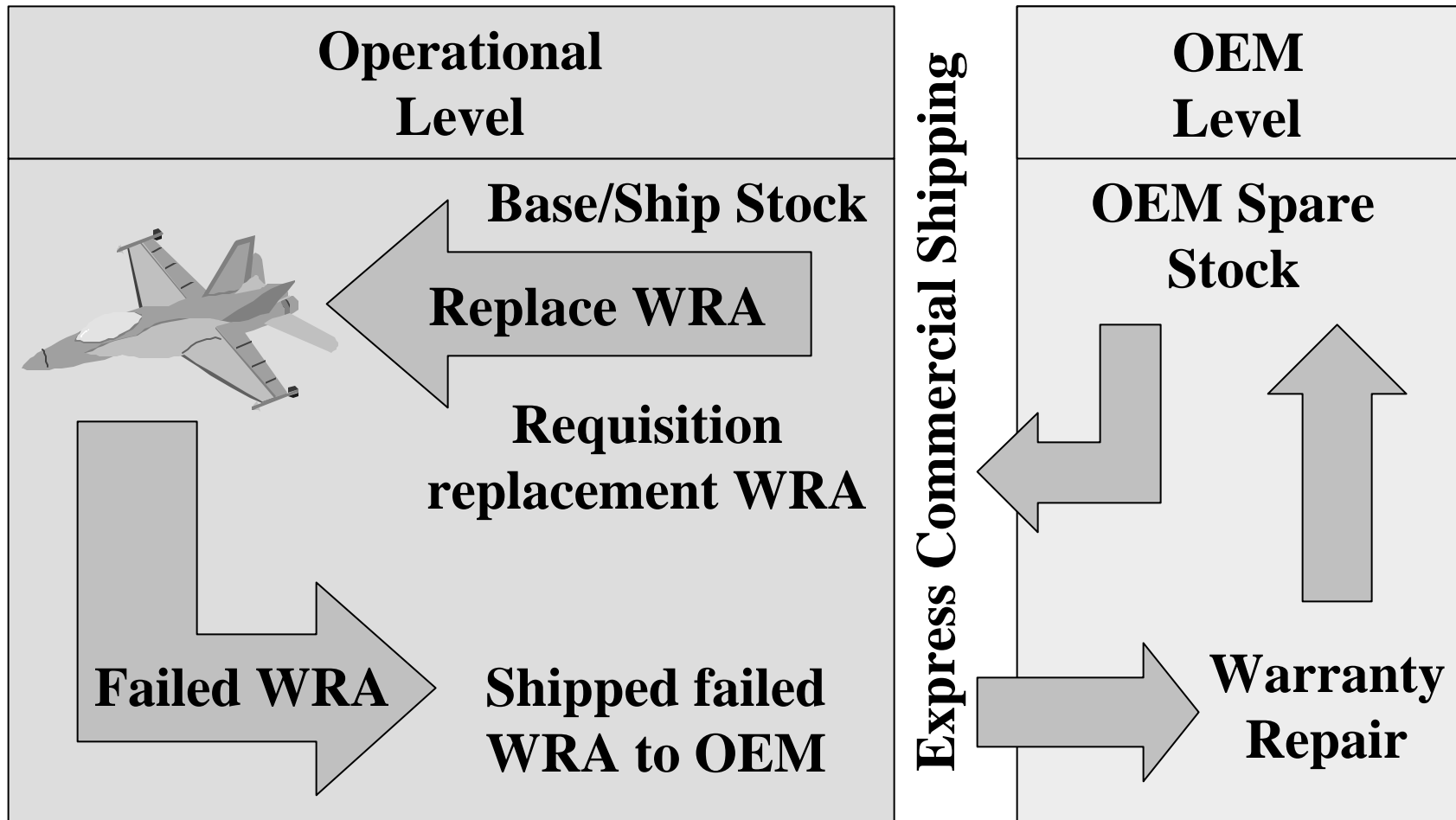
by

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# Modeling

- Creates a virtual world where executives can safely test hunches, run scenarios, and preview outcomes for varying decision alternatives - all without major investment or risk
- An aid to thinking - not a replacement for thinking
- Facilitates discussion and visualization of complex systems and processes

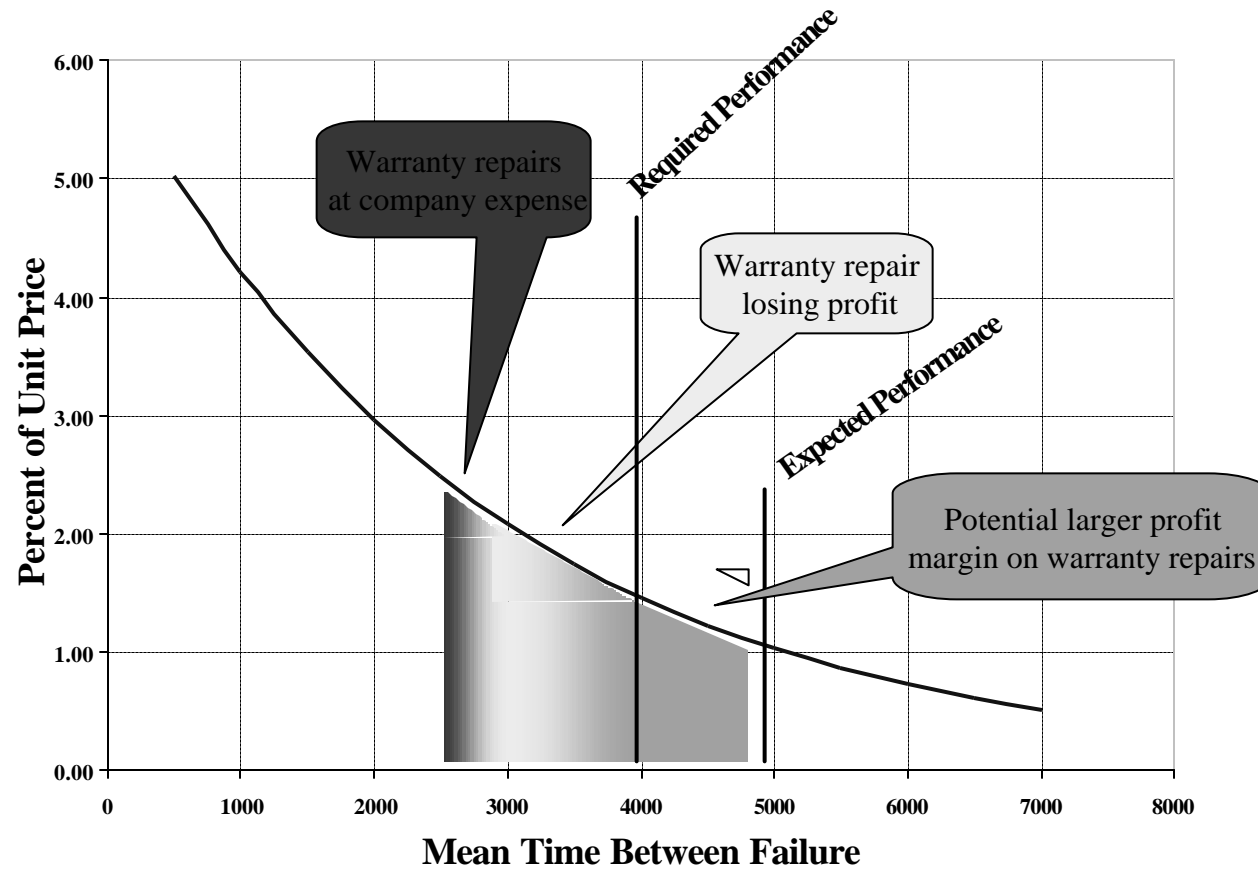
# Warranty Repair Concept

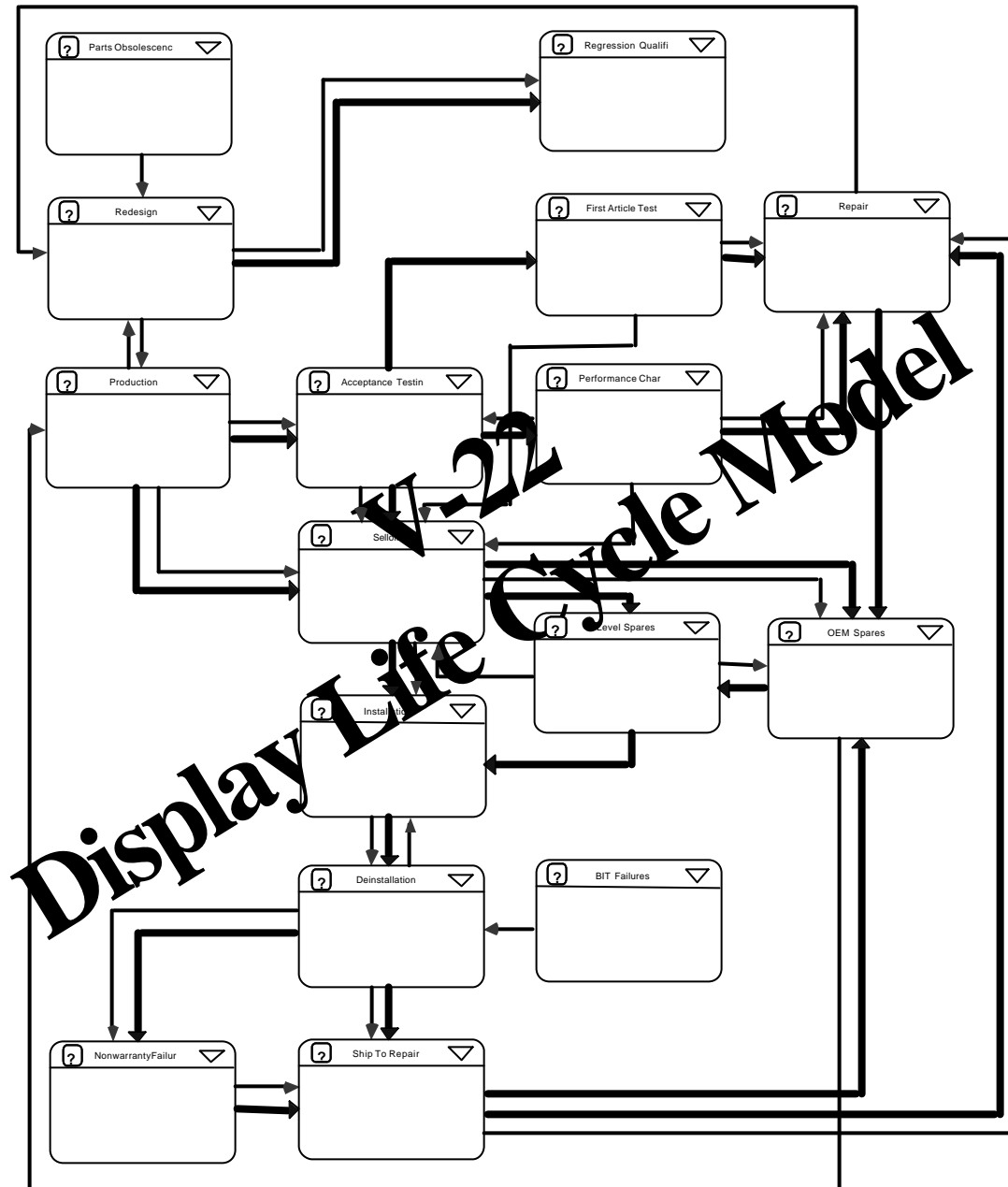


# Product Warranty

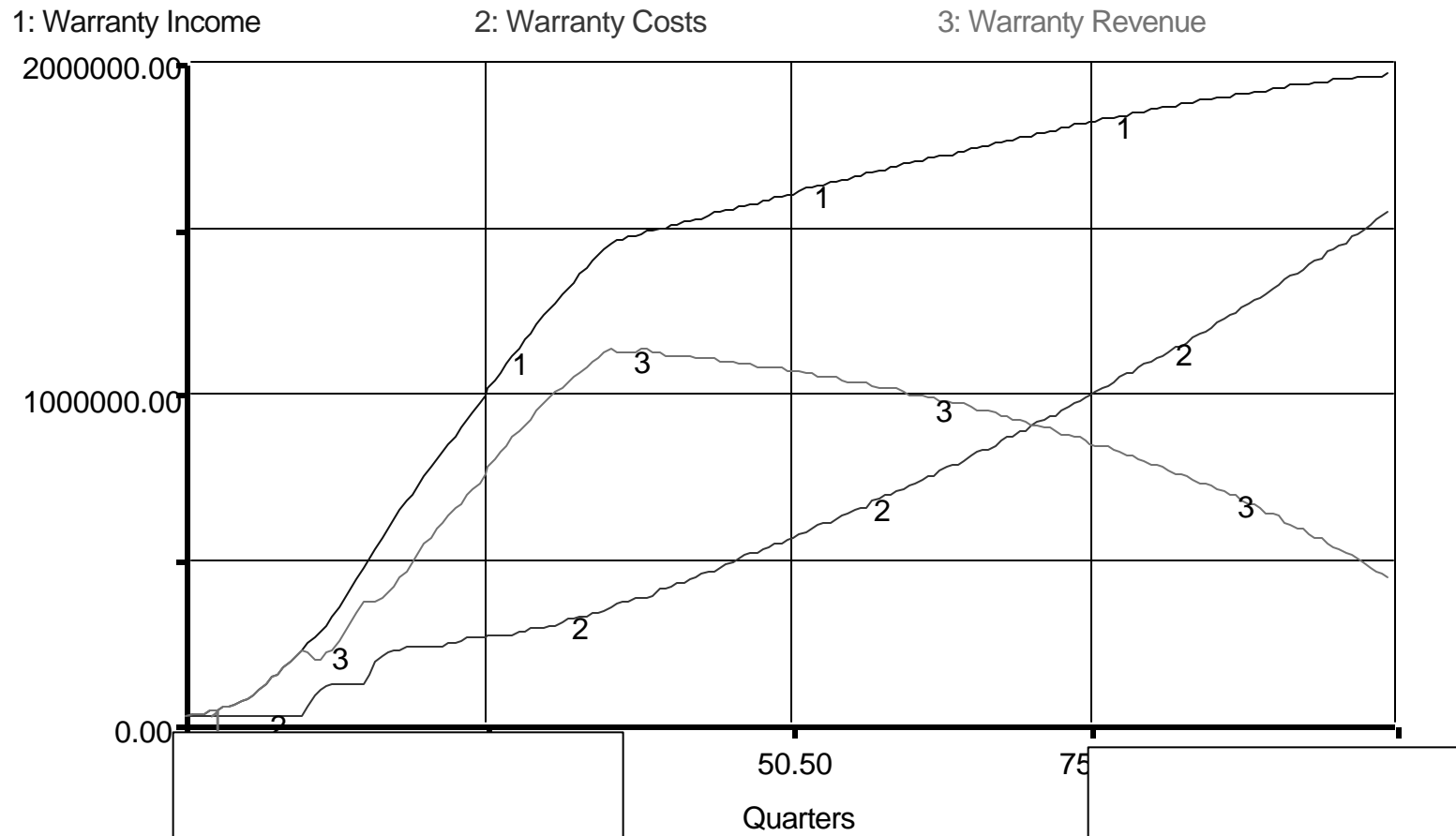
- Offers a product support solution that provides greater capabilities at a significantly lower cost
  - Minimizes owned infrastructure
  - Major discriminator in competitive DOD programs
- A warranty provides customers a fixed price alternative with a guaranteed operational availability
- Fused information, logistics and transportation technologies can provide an economical commercial based operating approach that can reduce inventories and enhance operational availability

# Warranty Cost Concept





# Warranty Revenue



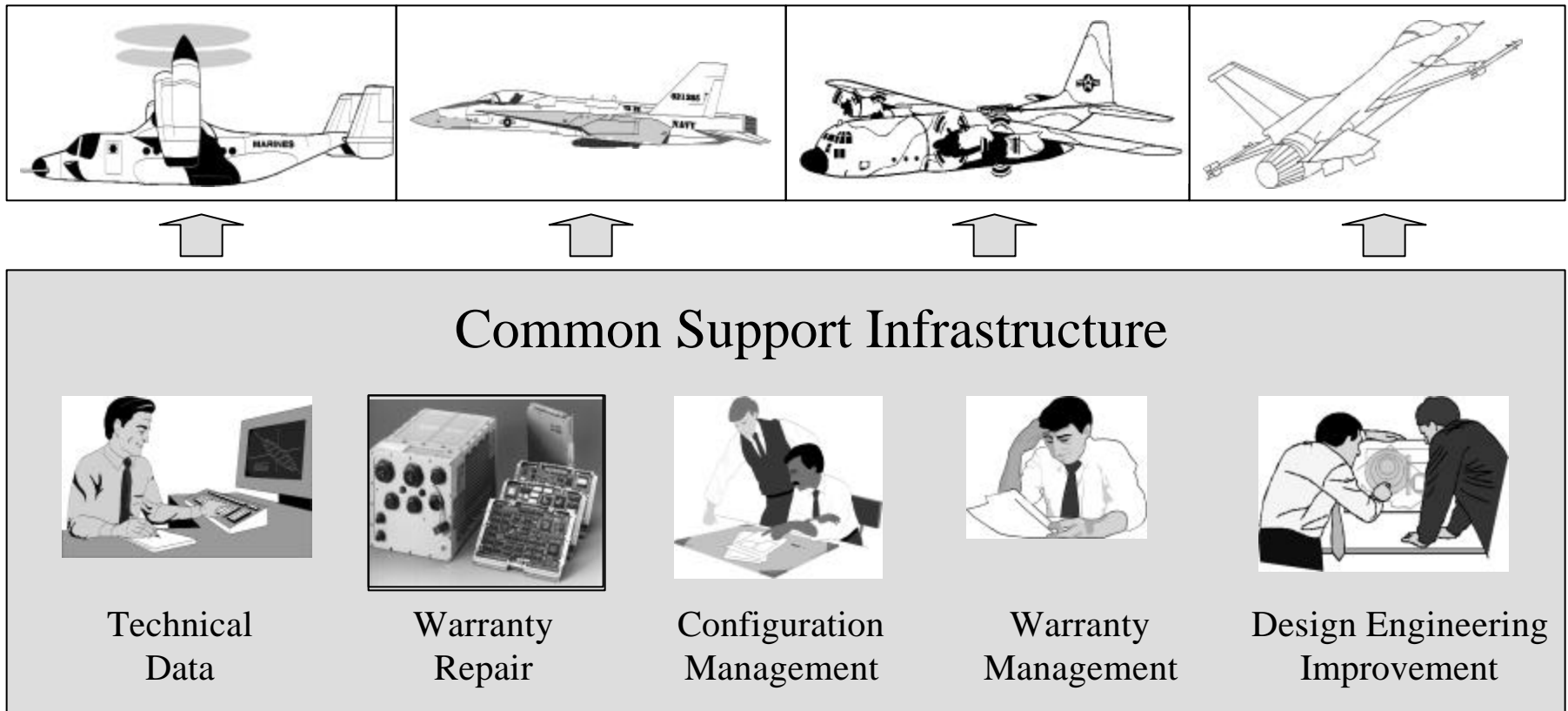
# Typical Parameters

- Orderbooks
- Installation Schedule
- Sampling Rates
- Failure Rates
- Useful Life
- Scrap Rates
- Redesign Threshold
- Cost to Repair
- Cost Before Loss
- Redesign & Regression Test Cost

# Warranty Terms

- Bumper to Bumper for life of unit, including
  - Repairs for failures
  - Removal, but not failed
  - Parts obsolescence
  - Reliability enhancements
  - OEM spares
- Government buys O-level spares only
- Damage due to handling negotiated periodically

# Common Product Support



# Who's Cares

- The U.S. Army plans to make life cycle cost part of contractor performance parameters. It wants its suppliers to deliver maintenance guarantees equal to most of today's automobiles. "In the future, suppliers will build and maintain equipment at a set price." (MGEN David Gust)
- The Joint Logistics Advanced Concept Technology Demonstration (DARPA) is directed at providing an interoperable logistics system that can provide support in days and hours, rather than weeks. This includes tracking and redirecting items enroute and delivering tailored sustainment packages to forces at all levels.

# Conclusion

- Use of product life cycle modeling provides a no risk method of examining the impact of proposed changes
- Collection and inclusion of “actuals” into model provides a dynamic management tool
- Use product life cycle modeling and assessment to develop and introduce new/other products
- Stay out in front with Advanced Product Support Concepts and Product Warranties

# Questions?



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